

EPRI
Green Pricing

APS Solar Partners

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APS Solar Programs

- **APS Solar Test and Research Center - Constant search new cost-effective solar products/technologies to meet customers needs**
- **Project SOL - Educationally based PV systems with Web interaction - museums, libraries, observatory - for customer education**
- **APS Remote Solar Electric Service - Choice for APS customers in remote areas to a line extension or generator**
- **APS Solar Partner Program - Choice for grid-tied customers who will pay a premium to have a portion of the electricity needs generated from the sun**



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Why Integrate Solar Into Service

- **Consumers expect a clean and sustainable environment**
- **Consumers are getting choice in electricity suppliers**
- **Consumers perceive solar as a viable option to meet these needs**
- **Arizona's greatest renewable resource**

Consumer Driven Solar Strategy

- Awareness/Education - need an informed consumer making knowledgeable decisions
- Product Development/Introduction - develop products that consumers want and that meet expectations
- Commercialization - develop long-term, sustainable (profitable), consumer-focused growth strategy

Market Size/Penetration

↪ When given a choice - 80% pick solar

↪ 60% say they will pay more for solar/renewable

↪ 1.5% market share in test market

- Green community, saturation marketing

↪ Green segment represents 5%-8% of total market - 1.5% of total market equates to 18% to 30% of niche.

APS Solar Partner Program

- **Green pricing program**
- **Customers pay \$2.64 per 15 kWh block of solar generated electricity per month**
- **The premium goes to develop new solar generating capacity (pays 1/3 the cost)**
- **Over 1500 customers to date**
- **Customers average \$5.00+ premium per month**



Solar Partner Program Success

Test market - 2% participation

- **Very green market/highly educated**
- **Extensive promotion**
- **Sold all existing and planned capacity**

Overall market - .2% participation

- **Minimal promotion - minimal capacity - bill stuffers (expected response)**

Customer Demographics

- ↪ College or graduate degree
- ↪ Smaller family size - 2.3- empty nesters
- ↪ 44-55
- ↪ 60% internet access
- ↪ Considers themselves an Environmentalist
- ↪ Segment represent 5-8% of total market

Planned Program Growth

➤ **500 kW of solar generation capacity by end of 2000**

➤ **1 MW by end of 2001**

➤ **Enough for 15,000 15 kWh blocks of solar energy or about 7,500 customers - 1%**

➤ **Continue promotion to Residential customers - existing channels**

➤ **Introduce to C&I customers**



Issue - EPS

Arizona Mandates Environmental Portfolio Standard

- .2% of kWh sold in 2001 escalating to 1.1% in 2007
- minimum 50% solar and 50% other renewables
- Minimum need to add between 5 and 11 MW solar per year to meet APS requirement - total 56 MW by 2007
- Assume \$6/watt cost of solar electric - \$30-\$66 million annually through 2007 or over \$330 million total
- Includes credits for early installation, green pricing program (could cost more)
- \$12 million annually approved - \$6 million from APS and SBC of \$6 million annually (\$0.35/mo. residential)



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Growth Issues

➤ RPS Impact on green pricing programs

- **Mandates may cause customers to reject voluntary program**
- **Technology risk - newer low cost technologies emerge**
 - **HCPV @ \$3-\$4/watt, Dish Stirling @ \$2-\$3/watt**
- **Rush to implement may impact quality**

➤ Unknown growth potential

➤ Cost and time of market establishment and development



Summary

- **Still in awareness building level of product development/lifecycle**
- **Need to deliver on promises**
- **Manage customer expectations**
- **Investing in the future**
- **Expect great change**